

In the Claims

The claims have been amended as follows:

- 1 Claim 1 (currently amended) A composite comprising:
- 2 a first substrate;
- 3 a bonded mixture, said bonded mixture comprising a mixture of binder particles
- 4 and super-absorbent polymer particles, wherein said super-absorbent
- 5 polymer particles having a property of forming a three-dimensional array of
- 6 elongated channels upon contact with a liquid in the manner of SP-1224,
- 7 and said binder particles are on average smaller than said super-absorbent
- 8 polymer particles, and wherein at least some of said binder particles
- 9 coalesce at least some of said super-absorbent polymer particles to each
- 10 other and to said substrate; and
- 11 ~~a said~~ three-dimensional array of elongated channels within said composite,
- 12 formed ~~after the~~ by said super-absorbent polymer particles when in contact
- 13 with a liquid, which promote liquid acquisition into said composite along
- 14 the three-dimensional array of elongated channels prior to liquid absorption
- 15 by the super-absorbent polymer particles.

- 1 Claim 2 (original) The composite of claim 1, wherein at least some of said bonded
- 2 mixture has the property of collecting liquid within said three-dimensional array,
- 3 and the collected liquid in said array is absorbed by at least some of said bonded
- 4 mixture.

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1 Claim 3 (original) The composite of claim 1, further comprising a second substrate,
2 and said bonded mixture is between said first substrate and said second substrate,
3 and wherein at least some of said binder particles coalesce at least some of said
4 bonded mixture to said second substrate.

1 Claim 4 (original) The composite of claim 1, wherein said bonded mixture has a dry
2 thickness of less than about 2 millimeters.

1 Claim 5 (original) The composite of claim 3, wherein said bonded mixture has a dry
2 thickness of less than about 2 millimeters.

1 Claim 6 (original) The composite of claim 1, wherein a liquid permeable
2 acquisition layer is in liquid communication with said bonded mixture.

1 Claim 7 (original) The composite of claim 3, wherein a liquid permeable
2 acquisition layer is in liquid communication with said bonded mixture.

1 Claim 8 (original) The composite of claim 1, wherein said first substrate is semi-
2 permeable or impermeable to liquid.

1 Claim 9 (original) The composite of claim 3, wherein said first substrate and said
2 second substrate are either semi-permeable to liquid, impermeable to liquid, or a
3 combination thereof.

- 1 Claim 10 (previously presented) A method of absorbing liquid comprising the steps
2 of:
- 3 a) placing a composite adjacent to a liquid source, wherein said composite
4 comprises
5 a first substrate and a bonded mixture, said bonded mixture comprising
6 a mixture of binder particles,
7 super-absorbent polymer particles, and
8 a three-dimensional array of elongated channels within said composite
9 formed after contact with a liquid from said liquid source,
10 wherein said binder particles are on average smaller than said super-
11 absorbent polymer particles; and wherein at least some of said binder
12 particles coalesce at least some of said bonded mixture to said substrate,
- 13 b) acquiring the liquid into the composite along the three-dimensional array of
14 elongated channels; and
- 15 c) absorbing the liquid by means of at least some of said bonded mixture.

- 1 Claim 11 (previously presented) The method of claim 10, wherein at least some of
2 said bonded mixture collects liquid from said liquid source within said three-
3 dimensional array, and the collected liquid in said array is absorbed by at least
4 some of said bonded mixture.

1 Claim 12 (original) The method of claim 10, wherein said composite further
2 comprises a second substrate, and said bonded mixture is between said first
3 substrate and said second substrate, and wherein at least some of said binder
4 particles coalesce at least some of said bonded mixture to said second substrate.

1 Claim 13 (original) The method of claim 10, wherein said bonded mixture has a dry
2 thickness of less than about 2 millimeters.

1 Claim 14 (original) The method of claim 12, wherein said bonded mixture has a dry
2 thickness of less than about 2 millimeters.

1 Claim 15 (original) The method of claim 10, further comprising a liquid permeable
2 acquisition layer in liquid communication with said bonded mixture.

1 Claim 16 (original) The method of claim 12, further comprising a liquid permeable
2 acquisition layer in liquid communication with said bonded mixture.

1 Claim 17 (currently amended) A liquid absorbent pad which comprises:
2 an outer layer of a substantially liquid-impervious material having an outer
3 surface and an inner surface;
4 at least one composite segment positioned on said inner surface of said liquid
5 impervious material, said at least one composite segment comprising:

6

6 a first substrate and a bonded mixture, said bonded mixture comprising a
7 mixture of binder particles and super-absorbent polymer particles, said
8 super-absorbent polymer particles having a property of forming a three-
9 dimensional array of elongated channels upon contact with a liquid in
10 the manner of SP-1224, wherein said binder particles are on average
11 smaller than said super-absorbent polymer particles, and wherein at least
12 some of said binder particles coalesce at least some of said bonded
13 mixture to said substrate; and
14 a said three-dimensional array of elongated channels within said at least one
15 composite segment formed after said at least one composite segment is
16 contacted with a liquid; and
17 a liquid-permeable acquisition layer in liquid communication with said at least
18 one composite segment, wherein at least a portion of said outer layer and
19 said liquid permeable acquisition layer are directly or indirectly attached,
20 and said at least one composite segment is sandwiched therebetween.

1 Claim 18 (original) The liquid absorbent pad of claim 17, wherein said at least one
2 composite segment further comprises a second substrate, and said bonded mixture
3 is between said first substrate and said second substrate, and wherein at least some
4 of said binder particles coalesce at least some of said bonded mixture to said
5 second substrate.

1 Claim 19 (original) The liquid absorbent pad of claim 17, wherein said at least one
2 composite segment has a bonded mixture having a dry thickness of less than about
3 2 millimeters.

1 Claim 20 (original) The liquid absorbent pad of claim 18, wherein said at least one
2 composite segment has a bonded mixture having a dry thickness of less than about
3 2 millimeters.

1 Claim 21 (currently amended) A liquid absorbent pad comprising:
2 a substantially liquid-impervious material having an outer surface and an inner
3 surface;
4 a composite positioned on the inner surface of said substantially liquid
5 impervious material, said composite comprising a first substrate and a
6 bonded mixture, the bonded mixture comprising a mixture of binder
7 particles and super-absorbent polymer particles, wherein said super-
8 absorbent polymer particles having a property of forming a three-
9 dimensional array of elongated channels upon contact with a liquid in the
10 manner of SP-1224, and said the binder particles are on average smaller than
11 the super-absorbent polymer particles, and wherein at least some of the
12 binder particles coalesce at least some of the bonded mixture to the first
13 substrate;
14 a-said three-dimensional array of elongated channels within said composite
15 when said liquid absorbent pad is contacted with a liquid.

1 Claim 22 (previously presented) A liquid absorbent pad of claim 21 wherein the
2 three-dimensional array of elongated channels within the composite acquire any
3 liquid in contact with said liquid absorbent pad into said composite prior to
4 absorption of the liquid by the super-absorbent polymer particles.

1 Claim 23 (previously presented) The liquid absorbent pad of claim 21, wherein said
2 composite further comprises a second substrate, and said bonded mixture is
3 between said first substrate and said second substrate, and wherein at least some of
4 said binder particles coalesce at least some of said bonded mixture to said second
5 substrate.

1 Claim 24 (previously presented) The liquid absorbent pad of claim 22, wherein said
2 composite has a bonded mixture having a dry thickness of less than about 2
3 millimeters.

1 Claim 25 (previously presented) The liquid absorbent pad of claim 21, wherein said
2 composite has a bonded mixture having a dry thickness of less than about 2
3 millimeters.